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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,688	11/17/2003	Scott J. Deboer	MICRON.080C1C1	5369
20995	7590	06/29/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			SMITH, BRADLEY	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2824	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/714,688

Applicant(s)

DEBOER ET AL.

Examiner

Bradley K Smith

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*BS*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 18-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/17/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Search notes.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of species 1 in the reply filed on 6/9/04 is acknowledged.

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1-19 of U.S. Patent No. 6,365,453. Claim 1 discloses forming a conductive plug; covering said conductive plug with a shield; at least partially forming an electrical device adjacent the conductive plug while the conductive plug is covered with the shield, the conductive plug extending adjacent the electrical device at least about 20% of a height of the electrical device when completed, wherein forming the electrical device comprises forming a capacitor plug simultaneously with forming the conductive plug, depositing an interlevel dielectric

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above the capacitor plug, etching a via through the interlevel dielectric, and removing the capacitor plug, thereby extending the via; opening the shield; and extending a contact to directly contact the conductive plug after opening the shield which is the same subject matter disclose in claims 1, 2, 7-9 of the current application. Claim 10 disclose the same subject matter disclose in claim 3 of the current application. Claim 4 disclose the same subject matter disclose in claims 4–6 of the current application. Claim disclose the same subject matter disclose in claims 3 of the current application. Claim 11 disclose the same subject matter disclose in claims 10-12 of the current application. Claim 6 disclose the same subject matter disclose in claim 14 of the current application. Claim 7 disclose the same subject matter disclose in claims 15 of the current application. Claim 8 disclose the same subject matter disclose in claims 16 of the current application. Claim 9 disclose the same subject matter disclose in claims 17 of the current application.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1, 4-7, 12, and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts et al. Roberts et al. disclose forming a conductive plug beginning from a first level; covering said conductive plug with a shield (50); at least partially forming an electrical device beginning from the first level adjacent the conductive plug while the conductive plug is covered with the shield; opening the shield; and extending a contact (78) to directly contact the conductive plug after opening the shield, wherein the electrical device is distinct from a conductive plug (see figures 5-12). With regards to claim 4 Roberts et al. disclose forming a stacked capacitor. With regards to claim 5 Roberts et al. disclose forming a stacked capacitor higher than the upper level of the conductive plug. With regards to claim 6 Roberts et al. disclose forming an interlevel dielectric over the stacked capacitor over the conductive plug, and extending the contact comprises etching a via through the interlevel dielectric (the layer on which layer 74 lays) to expose the conductive plug (see figure 11). With regards to claim 7 Roberts et al. disclose forming lower plugs below the first level (28), the lower plugs electrically connecting the electrical device and the conductive plug to a plurality of transistor active areas in a semiconductor substrate. With regards to claim 12 Roberts et al. disclose forming capacitor in a memory array, including a common reference electrode (78) extending above the conductive plug. With regards to claim 16 and 17 respectively, Roberts et al. disclose removing (part of) the shield

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome

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either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley K Smith whose telephone number is (571) 272-1884. The examiner can normally be reached on 10-6 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brad Smith  
Patent Examiner  
Art Unit 2824